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AMERICAN INDUSTRIAL QUALITY AND TRAINING ACT OF 1991

DECEMBER 6, 1991.—Ordered to be printed

Mr. BROWN, from the Committee on Science, Space, and Technology, submitted the following

REPORT

together with

ADDITIONAL VIEW

[To accompany H.R. 3507 which on October 3, 1991, was referred jointly to the Committee on Education and Labor, the Committee on Energy and Commerce, and the Committee on Science, Space, and Technology]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, Space, and Technology, to whom was referred the bill (H.R. 3507) to establish programs under the Department of Commerce, and elsewhere, to promote a skilled workforce and United States industrial competitiveness, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

CONTENTS

		Page
I.	Purpose of the bill	7
II.	Background and need for the legislation	8
III.	Committee actions	13
IV.	Section-by-section analysis	15
V.	Committee view	17
VI.	Oversight findings and recommendations	18
VII.	Oversight findings and recommendations by the Committee on Government Operations	18
VIII.	Congressional Budget Act information	18
IX.	Congressional Budget Office cost estimate	18
X.	Effect of legislation on inflation	20
XI.	Changes in existing law made by the bill, as reported	20
XII.	Committee recommendation	20
XIII.	Additional view	21

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The amendments are as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "American Industrial Quality and Training Act of 1991".

SEC. 2. FINDINGS AND PURPOSE.

(a) FINDINGS.—The Congress makes the following findings:

(1) The position of the United States workforce in the world economy will face ever greater challenges from foreign workers in years to come as more and more advanced industrial and technical skills training is provided.

(2) For the past 20 years, the economy of the United States has grown through a large expansion in the labor force and technology. In the 1990s, the population of the United States is expected to grow at a rate slower than any time since the 1950s. As a result, American industry will have to achieve greater productivity rates through technological development in order to fuel economic expansion.

(3) Few professional job opportunities are available for noncollege-bound youth; instead they settle into lower wage jobs for a period of several years before advancing to more career-oriented positions.

(4) Fifty percent of our nation's graduating high school seniors do not pursue postsecondary education and nearly 25 percent of all high school students do not graduate, due, in part, to a lack of career relevance of their high school education.

(5) Presently, the United States does not have a centralized system to provide noncollege-bound youth with opportunities to develop advanced skills for the modern workplace; instead, as a nation, we try to meet our workforce training needs through many individual programs.

(6) Experts estimate that between two-thirds and three-quarters of the workforce of the year 2000 is already working today, demonstrating the need to train and retrain our existing workforce.

(7) In more than 10 nations, average wages are now higher than in this country, where average wages have dropped in real terms by 6 percent since 1980.

(8) Some United States companies have been very successful at furthering their competitive positions through a renewed attention to worker training, the redefinition of worker responsibilities, and the adoption of total quality or similar competitiv- ness-oriented strategies.

(9) The Fede -al Government does not keep complete, comprehensive statistics on worker training.

(b) PURPOSE.—It is the purpose of this Act—

(1) through apprenticeship-like experiences, to provide America's youth with advanced industrial, technological, and management skills in order to further industrial global competitiveness and provide the Nation's youth people with an opportunity to achieve high living standards;

(2) to encourage private sector United States manufacturing and technology-based enterprises to adopt total quality management practices and such other strategies as may further global competitiveness;

(3) to further the ability of community and technical colleges and other 2-year institutions of higher education to educate and train individuals who wish to pursue advanced technological and industrial skills;

(4) to encourage State governments to fully develop their technical education and technician training activities into unified State-wide systems that respond to the social, technological, and economic needs of localities and the State;

(5) to collect, in a systematic way, statistics on the annual expenditure of United States companies on formal worker training programs; and

(6) to study the feasibility of applying the concepts of total quality management to the operation of secondary and postsecondary educational institutions.

SEC. 3. AMERICAN WORKFORCE QUALITY PARTNERSHIPS.

(a) PROGRAM AUTHORIZED.—The Secretary of Commerce may make grants to eligible applicants having applications approved under this section to establish and operate American workforce quality partnership programs in accordance with the provisions of this section. The Secretary of Commerce shall award grants on a competi-

tive basis to pay the Federal share for American workforce quality partnership programs to establish workforce training consortia between industry and institutions of higher education.

(b) GRANT PERIOD.—Grants awarded under this section may be for a period of 5 years.

(c) GENERAL AUTHORITY.—Each grant recipient shall use amounts provided under the grant to develop and operate an American workforce quality partnership program.

(d) CONTENTS OF PROGRAM.—An American workforce quality partnership program shall establish partnerships between one or more technology-based or manufacturing sector firms and a local community or technical college or other appropriate institutions of higher education to train the employees of the industrial partners through both workplace-based and classroom-based programs of training.

(e) FEDERAL SHARE.—The Federal share of the cost of an American workforce quality partnersnip program may not exceed 50 percent of the total cost of the program. The non-federal share of such costs may be provided in-cash or in-kind, fairly valued. The total contribution of the proposed partnership should reflect a substantial contribution on the part of the industrial partners and appropriate contributions of the education partners, local or State governments, and other appropriate entities.

(f) APPLICATIONS.—

(1) IN GENERAL.—Each eligible applicant that desires to receive a grant under this section shall submit an application to the Secretary of Commerce at such time and in such manner as the Secretary shall prescribe.

(2) PLAN.—Each application submitted under this subsection shall contain a plan for the development and implementation of an American workforce quality partnership program under this section. Such plan shall—

(A) show a demonstrated commitment, on the part of the industrial partners, to adopt total quality management strategies or other plausible strategies to renew its competitive edge;

(B) demonstrate the need for Federal resources because of the long-term nature and risk of such an investment, the inability to finance such ventures because of the high cost of capitalization, intense competition from foreign industries, or such other appropriate reasons as may limit the industrial partners' ability to launch programs where worker training and development is a substantial component;

(C) demonstrate long-term benefit for all partners and the local economy, through an enhanced competitive position of the industrial partners, substantial benefits for regional employment, and the ability of the education partners to further their capabilities to educate and train other nonpartnership-affiliated individuals wishing to obtain or upgrade technical, technological, industrial management and leadership, or other industrial skills;

(D) make full, appropriate, and innovative use of industrial and higher education resources and other local resources such as facilities, equipment, personnel exchanges, experts, or consultants;

(E) provide for the establishment of an advisory board in accordance with subsection (h); and

(F) include an explanation of the industrial partners' plans to adopt new competitive strategies and how the training partnership aids that effort.

(3) APPROVAL.—The Secretary of Commerce shall approve applications based on their potential to create an effective American workforce quality partnership program in accordance with this section.

(A) CRITERIA.—In reviewing grant applications, the Secretary of Commerce shall give significant consideration to the following criteria:

(i) Saliency of argument for requiring a Federal investment.

(ii) Commitment of partnership to continue operation after the termination of Federal funding.

(iii) The likelihood that the training will lead to long-term competitiveness of the industrial partners and contribute significantly to economic growth.

(iv) The likelihood that the partnership will benefit the education mission of the education partners in ways outside of the scope of the partnership, such as developing the capability to train other nonpartnership-affiliated individuals in similar skills.

(B) PRIORITY CONSIDERATION.—The Secretary of Commerce shall give priority consideration to industries which are threatened by intense foreign competition important to the long-term national economic or military secu-

rity of the United States and industries which are critical in enabling other United States industries to maintain a healthy competitive position.

(g) USE OF FUNDS.—

(1) APPROVED USES.—Federal funds may be used for—

(A) the direct costs of workplace-based and classroom-based training in advanced technical, technological, and industrial management, skills, and training for the implementation of total quality management strategies, or other competitiveness strategies, contained in the plan;

(B) the purchase or lease of equipment or other materials for the purpose of instruction to aid in training;

(C) the development of in-house curricula or coursework or other training-related programs; and

(D) reasonable administrative expenses and other indirect costs of operating the partnership which may not exceed 20 percent of the total cost of the program.

(2) LIMITATIONS.—Federal funds may not be used for nontraining related costs of adopting new competitive strategies including the replacement of manufacturing equipment, product redesign and manufacturing facility construction costs, or salary compensation of the partners' employees.

(h) ADVISORY BOARD.—

(1) Each partnership shall establish an advisory board which shall include representation from multiple organizational levels of the industrial partners, the education partners, labor union representatives if a unionized workforce, and such other representatives and experts as may be appropriate or necessary.

(2) The advisory board shall—

(A) advise the partnership on the general direction and policy of the partnership including training, instruction, and other related issues;

(B) report to the Secretary of Commerce after the second and fourth year of the program, on the progress and status of the partnership, including its strengths, weaknesses, and new directions; and

(C) assist in the revision of the plans (submitted with the application under subsection (f)(2)(F)) and include revised plans as necessary in the reports under subparagraph (B).

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $50,000,000, from sums otherwise authorized to be appropriated, for each of the fiscal years 1992 through 1996 to carry out the purposes of this section. Funds authorized or otherwise made available for the scientific and technical research and services activities of the National Institute of Standards and Technology shall not be available for the purposes of this section.

SEC. 4. YOUTH TECHNICAL APPRENTICESHIP PROGRAMS.

(a) PROGRAM AUTHORIZED.—The Secretary of Labor is authorized to make grants to eligible applicants having applications approved under this section to establish programs to be known as youth technical apprenticeship programs in accordance with the provisions of this section. The Secretary of Labor shall award grants on a competitive basis to pay the Federal share for youth technical apprenticeship programs.

(b) GENERAL AUTHORITY.—Each grant recipient shall use amounts provided under the grant to develop and operate a youth technical apprenticeship program.

(c) CONTENTS OF PROGRAM.—A youth technical apprenticeship program shall—

(1) establish 3- or 4-year apprenticeship-like programs consisting of 2 years of secondary school preceding graduation and 1 or 2 years of postsecondary education with a common core of proficiency in mathematics, science, social science, and English and more applied technical, technological, industrial management and leadership, or other industrial skills designed to lead to an associate degree or other certificates of technical skills accomplishment;

(2) provide youth with stipended or salaried rotational work assignments within a specific manufacturing or technology-based company for the length of the program period for the purpose of broadly training youth in a variety of related technical, technological, industrial management and leadership, or other industrial skills;

(3) ensure that classroom and apprenticeship-like experiences are well coordinated, complementary, and relevant;

(4) make allowance and provision for those youth who may desire to advance to 4-year institutions of higher education, in lieu of career entry, upon successful completion of the apprenticeship-like experience;

(5) broadly educate and train youth program participants for skilled primary occupations in a variety of areas;

(6) be designed to have a substantial impact in terms of the number of students affected or geographic region served by the program;

(7) demonstrate a commitment to continue operation after termination of Federal funding;

(8) contribute substantially to the ability of local industry participants to obtain appropriately trained workers;

(9) be developed in accordance with local or regional economic development policies and with advice from appropriate local and State entities; and

(10) establish an advisory board in accordance with subsection (f).

(d) APPLICATIONS.—

(1) ELIGIBLE APPLICANTS.—Youth technical apprenticeship grants shall be awarded to nonprofit organizations representing labor, industry, or education or consortia of such organizations, or other appropriate entities as determined by the Secretary of Labor for periods of not more than 4 years.

(2) IN GENERAL.—Each eligible applicant that desires to receive a grant under this section shall submit an application to the Secretary of Labor at such time and in such manner as the Secretary shall prescribe.

(3) PLAN.—Each application submitted under this subsection shall contain a plan for the development and implementation of a youth technical apprenticeship program under this section. The plan shall include an explanation of how the program will continue to operate after the termination of Federal funds.

(4) APPROVAL.—The Secretary of Labor shall approve applications based on their potential to create an effective youth technical apprenticeship program in accordance with the provisions of this section.

(5) SPECIAL CONSIDERATION.—The Secretary of Labor shall give special consideration to applications which provide for the contribution of non-Federal funds.

(e) PLANNING GRANTS.—The Secretary of Labor shall award one time, one-year planning grants on a competitive basis to eligible applicants to apply for youth technical apprenticeship program grants, to develop full-scale plans and proposals for the program, and for other planning costs associated with applying for such grants and developing such programs. No planning grant under this subsection may exceed $50,000. At the discretion of the Secretary of Labor, planning grants may be awarded to organizations for the purpose of planning local youth apprenticeship programs not funded under this section.

(f) ADVISORY BOARD.—

(1) ESTABLISHMENT AND FUNCTIONS.—Each entity that is awarded a grant under subsection (d) shall establish an advisory board. The advisory board shall advise the youth technical apprenticeship program on general direction and policy.

(2) MEMBERSHIP.—An advisory board shall be composed as follows:

(A) 75 percent of the membership shall be individuals representing the secondary school systems, institutions of higher education, and companies that participate in the program and shall include at least one youth apprentice, and one representative from the grant recipient organization to serve ex-officio.

(B) 25 percent of the membership shall be individuals who are representative of groups not directly affiliated with the program but who have knowledge and expertise in the area of education, business and management, and technology or other relevant areas, such as educational experts, experts involved in the operation of other nonfederally funded apprenticeship programs, and officers and employees of State or local government.

(3) ANNUAL REPORT.—The advisory board shall submit annually to the Secretary of Labor a report concerning the progress, status, strengths, and weaknesses of the apprenticeship program.

(g) USE OF FUNDS.—

(1) Federal funds under this section may not be used to pay any stipend or salary to a participant in a youth technical apprenticeship program.

(2) Federal funds may be used for the following purposes:

(A) The development of complementary programs of study between participating secondary and postsecondary institutions of education, including coursework, seminars, student counseling, and mentorship.

(B) The development of industrial work programs that are well coordinated with student classroom experiences.

(C) Direct and indirect costs associated with the expenses of operating the program.

(h) CLEARINGHOUSE.—The Secretary of Labor, together with other appropriate entities, shall establish and maintain at the Department of Labor, or by contract, a readily accessible inventory of youth apprenticeship programs in the United States for the use of individuals or organizations that wish to learn more about or establish youth apprenticeship programs.

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $50,000,000, from sums otherwise authorized to be appropriated, for each of the fiscal years 1992 through 1996 to carry out the purposes of this section.

SEC. 5. STATEWIDE TECHNICAL EDUCATION AND TRAINING NETWORKS.

(a) GENERAL AUTHORITY.—The Secretary of Education is authorized to make grants on a competitive basis to State governments to pay the Federal share of the cost of programs under subsection (b).

(b) CONTENTS OF PROGRAM.—The Secretary of Education shall make grants to establish statewide technical education and training networks to develop plans or strategies to establish statewide systems for the provision of technical, technician, or technological skills and education by building upon Federal, State, and local programs through such methods as—

(1) reviewing the extent to which articulation agreements are used and can be used between 2- and 4-year institutions of higher education and between high schools and work-based learning, vocational, and technical skill and education programs in order to provide effective links between education levels;

(2) the examination of existing programs or the exploration of new programs to fill training needs that currently go unmet or serve populations which are currently underserved;

(3) the evaluation and review of programs with the intention of identifying the most effective and efficient means to achieve training goals;

(4) efforts to encourage renewed cooperation of the private sector in assisting in programs that fulfill the training needs of the State; and

(5) the planning of unified systems that provide citizens of the State who do not currently wish to pursue bachelor or advanced degrees a clear and identifiable path to careers in technical areas with the purpose of achieving comfortable living standards.

(c) SUBMISSION OF APPLICATIONS.—Applications shall be submitted through the chief executive officer of the State.

(d) FEDERAL SHARE.—Federal funds provided under this section may not exceed 50 percent of the total cost of establishing a statewide technical education and training network.

(e) REPORT.—Not later than 3 years after the award of a grant under this section, the chief executive officer of a State shall submit a report to the Secretary of Education evaluating the achievements of, and difficulties in unifying on a statewide basis, Federal, State, and local programs and suggest ways in which the Federal Government could improve its programs in order to better meet the training needs of the citizens of the State.

(f) DEFINITION.—For purposes of this section, the term "State" includes the District of Columbia, and the Commonwealth of Puerto Rico.

(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $15,000,000, from sums otherwise authorized to be appropriated, for each of the fiscal years 1992 through 1996 to carry out the purposes of this section.

SEC. 6. INDUSTRY WORKER TRAINING INFORMATION.

(a) GENERAL AUTHORITY.—The Secretary of Labor, in conjunction and consultation with the Small Business Administration and other relevant agencies, shall compile information and statistical data, at the Department of Labor or by contract, on the total annual expenditure of United States industry on formal worker training programs, quantity of training, and other relevant worker training information in the following areas—

(1) by firm size: for example, small, medium, and large companies;

(2) by and within sector: for example, service and manufacturing;

(3) by industry, such as—

(A) automobiles;

(B) financial;

(C) computer software and hardware;

(D) steel and other process and natural resource-based industries; and

(E) consumer electronics;

(4) by job classification, such as—

(A) marketing;

(B) sales;

(C) professionals;
(D) first-line supervisors;
(E) middle managers;
(F) executives;
(G) production workers; and
(H) office workers;
(5) by purpose of training, such as—
(A) entry level;
(B) skills upgrading; and
(C) training for advancement; and
(6) any other data such as international comparative data that may be available and appropriate.

(b) REPORT TO CONGRESS.—The Secretary of Labor shall submit biennially a report to the Congress providing such information and statistical data in a useful format. The Secretary shall also make such information available to United States industry.

(c) AUTHORIZATION.—There are authorized to be appropriated, from sums otherwise authorized to be appropriated, sums as may be necessary for each of the fiscal years 1992 through 1996 to carry out this section.

SEC. 7. REPORT ON TOTAL QUALITY SCHOOLS.

(a) REPORT TO CONGRESS.—Not later than 180 days after the date of enactment of this Act, the Secretary of Education, in conjunction with the Secretary of Labor and the Secretary of Commerce, shall submit to the Congress a report on the feasibility of encouraging the adoption of Total Quality Management principles to improve the quality and relevance of primary, secondary, and postsecondary education, through the establishment of an award comparable to the Malcolm Baldrige National Quality Award.

(b) CONTENT.—The report under subsection (a) shall include descriptions of—

(1) standardized criteria to identify a Total Quality school, including a description of the respective roles of parents, students, teachers, administrators, State, local, and Federal governments, the private sector, and other customers of the educational system;

(2) a model for the standardization of a Total Quality curriculum, including where possible descriptions of the appropriate use of Total Quality principles in the content, development, and delivery of such a curriculum;

(3) the extent to which the Malcolm Baldrige National Quality Award criteria may be used as a guideline for establishment of an award for quality in education;

(4) the effects of a curriculum embodying Total Quality Management principles on education and student learning, including an analysis of the costs and benefits of the adoption of Total Quality approaches to education; and

(5) specific recommendations of the Secretaries for Congressional action.

(c) Total Quality School.—For the purposes of this section, a "Total Quality school" is a school employing the principles of Total Quality Management to improve the quality and relevance of the educational experience.

SEC. 8. USE OF DOMESTIC PRODUCTS.

Each grant of Federal funds under this Act shall include a notice encouraging the recipient to acquire United States products as necessary to carry out the purposes of the grant.

Amend the title so as to read:

A bill to establish programs under the Department of Commerce, and elsewhere, to promote a skilled workforce and United States industrial competitiveness.

I. PURPOSE OF THE BILL

The purpose of this bill is to provide America's youth with advanced industrial, technological, and management skills in order to further industrial competitiveness and to give them an opportunity to achieve higher standards of living. This bill is intended to encourage private sector United States manufacturing and technology-based enterprises to adopt total quality management practices and such other strategies as may further global competitiveness.

This bill provides incentive grants to State governments to restructure and fully develop their technical education and techni-

cian training activities into unified State-wide systems that respond to the social, technological, and economic needs of localities and the State. The bill further provides for the collection, in a systematic way, of statistics on the annual expenditure by United States companies on formal worker training programs and for the study of the feasibility of applying the concepts of total quality management to the operation of secondary and postsecondary educational institutions.

II. BACKGROUND AND NEED FOR THE LEGISLATION

There is now broad consensus that workforce skill and education levels are important elements in the international competitiveness issue. In the past, much of the expansion in our economy had to do with the increasing size of our labor pool. Because of a slowing population growth rate, the nation will have to depend more heavily upon increases in national productivity growth rates in order to fuel economic expansion. Achieving vastly higher rates of growth in productivity will require a change in American business organization practices and a much stronger emphasis on workforce training and quality education at all levels and of all types.

According to the Center on Education and the Economy which cited U.S. Bureau of Labor statistics for 1979 to 1989, "A dozen nations now pay wages above ours. Real wages in the U.S. have dropped by 6 percent since 1980. Our distribution of income is more skewed than any of our major competitors and our poverty rate is much higher." In plain terms, there is indication that the nation is having trouble competing in the international marketplace.

Paradoxically, America must also compete with low wage nations like Mexico, Singapore, Taiwan, and Korea. Wages in these countries are only a fraction of American wages. This "wage gap" must be made up on the shop floor by organizing work more efficiently, reducing waste, and avoiding large and costly inventories. Put simply, each employee must create more with less waste and in less time. Many companies in high wage nations like Germany and Japan have been able to accomplish this efficiency in organization. These countries have managed to sustain large trade surpluses despite competition from low wage nations, while America has been consistently reporting deficits.

In order to compete, the organization of our companies must change. Many companies are still employing the Taylor system of mass production despite the fact that some of the companies that are most successful in the international marketplace consider it to be outmoded. In the Taylor system, each front-line worker is responsible for only a small, repetitive part of the total production process. Front-line workers are sometimes aided by an average of four, five or six indirect support workers. These indirect support workers are responsible for setting up and maintaining machines, inspecting for quality, ordering, receiving and delivering supplies, hiring and firing employees, and designing products and production processes. The organization is bureaucratic and hierarchical—many layers exist between the CEO and the line worker.

In a "high-performance workplace", workers make decisions and exercise their own judgment and expertise when faced with a prob-

lem. Gone is the need to follow strict procedures by the manual or to wait for supervisors to arrive on the shop floor. For this reason, organizational structures become flatter and management layers vanish. Production workers begin to take over many of the tasks which were performed by management. Workers need to have advanced skills and more advanced technical training in order to perform more complex jobs.

In short, proponents of the "high-performance organization" argue that their philosophy better enables them to compete. They say that the way to compete is to operate at a high productivity level which enables them to produce better quality products at lower costs. In addition, in the "high-performance workplace" workers embrace the Japanese management concept of "kaizen" which means continuous improvement.

Statistics on Americans lacking basic literacy skills range from the U.S. Department of Education's estimate of 17 to 21 million to as many as 60 million, published in 1991 in the American Association of Community and Junior Colleges Journal. Moreover, the cost of functional illiteracy to the eight southeastern states amounts to nearly $25 billion annually due to poor performance, lost time, and other performance related problems of the estimated 3.6 million employed, but under-educated, workers in the region.

Nearly 60 percent of all people in prison are high school dropouts, costing taxpayers an average of $16,000 per person-year as opposed to $4,300 for a year of high school.

Fifty percent of our seniors terminate their formal education with graduation from high school. Moreover, more than 20 percent of all students and 50 percent of students in many inner cities drop out before completing high school. This is due, in part, to a fault in our system. Many high school students see no clear link between school and jobs; or at least they see no well defined route between the two.

Today, half of our high school students are confined to the so-called general track, offering them neither strong academic nor work-based skills. At best, these young people face low-skill, low-paying secondary labor market jobs for a year or more following graduation; at worst, they face unemployment.

A Department of Education study found that 63.5 percent of those who had dropped out of high school before graduation were general track students at the time of their departure compared with only 6.7 percent from the academic track and 29.8 percent from the vocational track.

A different survey of adults ages 21 to 25, titled the National Assessment of Education Progress (NAEP) published in 1989 by the Educational Testing Service, found that 20 percent of those surveyed cannot read at the eighth grade level of competency, and 38 percent have not achieved the eleventh grade reading level. Many job manuals are written at the 10th to 12th grade levels of reading competency.

The study states, "By yesterday's standards the news is good: Ninety-five percent can read and understand the printed word. In terms of tomorrow's needs, there is cause for concern: only a very small percentage can understand complex material. While we don't have a major illiteracy problem, we do need to improve the skills of

most of our young adults. In other words, we do have a literacy problem."

Japanese high school students must complete at least two years of mathematics and two years of science. Many U.S. schools require only one year of mathematics and science. Ninety percent of all Japanese graduate from high school. They attend school 240 days a year and spend an average of two hours per day studying compared with 180 days with about one hour of study for American students. Moreover, despite the fact that Japan has half the population of the U.S., it graduates more engineers from undergraduate college programs than does the U.S.

In addition, Japanese teaching philosophy is more compatible with ideas embodied in the competitiveness strategies discussed above, such as Total Quality Management. Japanese high school teachers are rewarded for improving the level of achievement of each of their students rather than on their ability to raise the aggregate mean. In the United States, we tend to believe that some children are not meant to do well in school. These children are often left behind in favor of high academic achievers. In addition, many Japanese consider the introduction of market forces in education to be an important factor in their achieving quality. Students have the choice to attend the best schools that will accept them based on their academic credentials—somewhat like our college system.

In the United States, education is primarily an issue of local government control. However, local control has its share of problems—namely disparity in per pupil funding ratios. According to the report, "America's Choice: High Skills or Low Wages" published in 1990 by the Commission on the Skills of the American Workforce, poor communities in Ohio spend as little as $2500 per pupil, while wealthier areas spend up to $10,000. Ohio is by no means the only state with this disparity. Moreover, the corporate share of local property tax revenues, which pay for local schools, dropped from 45 percent nationally in 1957 to 16 percent in 1989.

Industry must emphasize that the education system is perhaps its most important supplier. For this reason, it must work with schools—as it does with other suppliers—to ensure that the product it receives meets its needs. Toward this end, then Secretary of Labor Elizabeth Dole, in 1990, appointed the Secretary's Commission on Achieving Necessary Skills (SCANS). SCANS will be attempting to improve the relevance of education to achieving national economic and competitiveness goals. The first step is to identify the specific skills that workers need for productive employment. The Commission will recommend proficiency levels, the means to achieve these levels, and effective ways to determine whether or not students are attaining these levels. The Commission on the Skills of the American Workforce suggests taking one step further, which is to award technical and professional certificates for various mastery levels.

The U.S. must begin to think in terms of an alternative formal system to university education which is capable of providing alternative routes to productive careers for noncollege-bound students. Unfortunately, at this time the U.S. "system" works very poorly. It does not permit efficient articulation between education levels and

does not adequately blend work-based or technical subject matter with the more traditional core programs of study in the basic sciences.

Many countries are very successful at channeling non-college-bound students from high school to productive careers. In Germany and Sweden, for example, government involvement is heavy. These countries provide vocational high schools, technical higher education institutes, and apprenticeship programs that are recognized as highly legitimate components of the education system, not just obscure and less desirable alternatives to university education. In Japan, high quality elementary and secondary education, combined with extensive training on the job, results in a highly skilled workforce. In the United States, we have heavy involvement neither on the part of government nor industry. Instead we have varying degrees of involvement of many: industry, federal, state, and local government.

Unlike some European nations, our secondary educational system is tied primarily to the postsecondary educational system, not the labor market. Moreover, a high school diploma counts for less in today's labor market than it once did. Experts believe that technical education, such as youth apprenticeship programs, can offer an alternative that may appeal to noncollege-bound students and may aid in furthering U.S. international competitiveness. It often appears that traditional secondary school vocational programs have a better track record placing students in college than in the jobs for which they were trained. If so, this is further evidence that our education system and labor market exist in partial isolation from each other.

Postsecondary technical education seems to have a better track record. Studies have shown that workers with postsecondary technical education perform better when first hired and often eventually become candidates for higher level positions in the firm. Moreover, taking technical courses as a high school student is associated with only small cutbacks in the number of academic courses taken. It is also associated with substantially higher employment rates and earnings in the eighteen months following graduation.

According to a report on worker training published in 1990 by the Office of Technology Assessment, "[t]he best vocational education programs * * * emphasize both practical and theoretical skills in a setting where students can work together. They also typically involve access to—or a blend of—vocational and academic courses."

The need for some form of technical education is apparent. Forty-two million people are employed in jobs that require a significant amount of training beyond a basic education, but not a four-year college degree. It is in these jobs that occupation-specific skills shortages are most often found.

Existing programs

The federal role in worker training and technical education is defined by two main programs which are related to technical education and worker training. The Job Training Partnership Act (JTPA) programs are housed at the Department of Labor and are primarily worker training programs. The Carl D. Perkins Vocation-

al Education Act authorizes vocational education programs from the Department of Education.

At the Department of Labor, employment and training programs total $5.2 billion in budget authority in FY 1992 and provide a variety of programs for those experiencing barriers to employment. The largest account in this function is the Training and Employment Services appropriation which finances programs authorized principally by the Job Training Partnership Act. The major programs in this account are the Block Grant, the Summer Youth Employment and Training program, the Economic Dislocation Worker Adjustment Assistance program, the Job Corps, and a variety of Federally administered programs. These programs are meant for disadvantaged workers who must meet specific eligibility criteria.

The Department of Labor also provides funds to state governments to operate apprenticeship programs. The program serves mostly individuals in the construction trades who are in the middle to late twenties age group. This program receives about $16 million annually. Although popular in Europe, here in the U.S., apprenticeship programs serve less than 300,000 people at any given time, mostly in construction trades, which is less than three tenths of one percent of our workforce.

The primary federal program related to technical education is established under the Carl D. Perkins Vocational Education Act and is budgeted at approximately $1 billion in FY 1991. No increase was requested in FY 1992. Of that, $63.4 million was requested for the Tech-Prep program with no increase planned in FY 1992. The Tech-Prep program is the only genuine technical rather than vocational education program funded by the federal government.

Many experts believe that Tech-Prep can help motivate high school students through a very "hands-on" and applied curriculum. Students can see why they are learning the information that they are learning and what effect it may have on their future careers. It is believed that colleges will gain better prepared high school students and employers will gain employees with advanced skills. The Tech-Prep program is a 2+2 program. It operates by introducing the high school student in his or her junior year to an integrated and gradually more complex technical preparation program that terminates with a community or technical college degree. It is based on the idea that students function best when goals are clear and expectations realistically based and they know why they are in school.

International programs

By international measures, the United States lags behind other nations in the degree of corporate involvement. Experienced production workers at Japanese auto assembly plants, for example, get three times as much training each year as their American counterparts. Leading foreign firms in Japan and Europe spend up to six percent of their total payroll on training, a significant share of which is devoted to upgrading the skills of production workers. In contrast, the top American firms spend approximately two percent of their payroll on training, much of it focused on management levels.

The German training system is renowned for its blending of training programs with classroom education. This is in contrast to Japan where schools and employers operate independently, but complementarily, to build a skilled workforce. After 10 years of schooling, as required by law, about 90 percent of West Germans continue in some sort of formal education/training program. Of those who continue, 75 percent enroll in an apprenticeship program, 20 percent remain in an academic high school in preparation for university enrollment, and the remaining 5 percent enroll in a vocational high school.

In Sweden, labor has a substantial role in vocational training. Labor and trade unions are the primary supplier of workforce training in conjunction with large employers. Sweden also relies heavily on school-based vocational education through upper-level secondary schools that provide both liberal arts and vocational or technical courses. About 55 percent of Swedish young people graduate from high school with a vocational specialty, after which they can expect extensive on-the-job training. The Swedish government input has been focused primarily on adult education. Adult education is nearly universally available and comes at little or no cost to the user.

The Korean workforce training policy is founded on the German example. As in Germany, the Korean Government has sought to promote the societal status of occupational training vis-a-vis academic education through a complex certification system and by requiring government agencies to hire persons with such credentials on a preferential basis. Moreover, Korea has made education and training a central component of the nation's economic planning and growth strategy. For the past twenty years, three-year vocational high schools and one-year training institutes have trained 2.4 million workers, which is half of Korea's current workforce.

III. COMMITTEE ACTIONS

H.R. 3507 was introduced by Representative Tim Valentine on October 3, 1991. The bill was referred jointly to the Committee on Science, Space, and Technology, the Committee on Energy and Commerce, and the Committee on Education and Labor. Within the Committee on Science, Space, and Technology, referral was made to the Subcommittee on Technology and Competitiveness.

On September 17th, 1991, the Subcommittee on Technology and Competitiveness held a legislative hearing on H.R. 2936, the "Technical Education and Training Act of 1991," (Mr. Price, D-NC) and H.R. 3507 (not introduced and, therefore, unnumbered at the time of the hearing), the "American Industrial Quality and Training Act of 1991." Mr. Price's bill focuses on strengthening community college programs of technical education and training through the authorization of a new program at the National Science Foundation. Mr. Valentine's bill addresses U.S. industrial competitiveness through the creation of training programs tied directly to private sector firms. Both bills strive to strengthen the nation's training infrastructure and ensure that the proper information is collected for further policy development, review, and oversight.

As stated in the hearing charter, the purposes of this hearing were the following:

1. To examine the role that the federal government should play in issues of workforce training and technical education and how these issues affect U.S. industrial competitiveness.

2. To gather expert opinion on H.R. 2936, "The Technical Education and Training Act of 1991" and H.R. 3507, "The American Industrial Quality and Training Act of 1991" in order to aid in Subcommittee legislative deliberations.

The testimony summarized below addresses H.R. 3507.

Witnesses made the point that the federal government should play an enabling or catalytic function in supporting worker training and technical education. Thus, it should focus on infrastructure building or those efforts that will enable further program development to flourish at the state and local levels or within the private sector.

The Subcommittee heard near universal support for H.R. 3507. The main suggestion made regarding H.R. 3507 was to include some form of technical assistance to support the American Workforce Quality Partnerships program called for in the bill.

Ms. Martha Quesada, Team Member, New United Motor Manufacturing (NUMMI), discussed the legislation from the perspective of a front-line auto worker who is employed by a company that places substantial emphasis on training. She particularly liked the fact that H.R. 3507 emphasized non-traditional students. NUMMI management endorsed the Youth Technical Apprenticeship program and the American Workforce Quality Partnerships programs.

Dr. Anthony Carnevale, Vice President and Chief Economist for the American Society for Training and Development, emphasized the need for the federal government to place emphasis on enabling a wide range of businesses to compete rather than focusing on narrow efforts. He endorsed the American Workforce Quality Partnerships and the Industry Worker Training Information programs of H.R. 3507.

Mr. James Schwarz, President of Omni-Circuits, Inc., spoke about his relationship as a supplier to Motorola. He also spoke about his difficulty in finding skilled workers. He strongly endorsed H.R. 3507.

In addition to the witnesses listed above, written testimony for the official record was requested from Robert W. Scott, President of the North Carolina System of Community Colleges, Secretary of Education Lamar Alexander, Under Secretary of Commerce for Technology Robert M. White, and Secretary of Labor Lynn Martin.

Robert Scott testified that H.R. 3507 is fundamentally sound legislation. He testified strongly in support of the Youth Technical Apprenticeship Program and the Competitive American Workforce Development Partnership. He also felt that the Statewide Technical Education and Training Planning Networks were extremely compatible with the intent of two major studies currently underway in North Carolina.

Secretary Alexander testified that he supported most of the goals of the bill. However, he felt that the proposals duplicated many of the activities authorized under the Adult Education Act, the Carl D. Perkins Vocational and Applied Technology Education Act, and

the Job Training Partnership Act. He did include in his testimony that the concepts underlying the proposals were sound.

Under Secretary White testified that he opposed the bill, because he felt that there was a multiplicity of ongoing activities within the federal government, the business sector, state and local governments and employee organizations. He felt the focus should be on coordinating public-private sector activities.

Roberts T. Jones, Assistant Secretary of Labor for Employment and Training, provided the testimony for the Department of Labor. He supported the goals of the legislation, but his testimony opposed the enactment of H.R. 3507 in light of ongoing activities in Labor and other Departments.

On the basis of suggestions made by witnesses at the hearing, by testimony submitted for the record, and by discussions with other interested groups, the Subcommittee on Technology and Competitiveness developed an amendment in the nature of a substitute to H.R. 3507. This amendment, offered by Chairman Valentine, deleted section 4, the American Industrial Quality Foundation. The Subcommittee felt that, while the concept of the Foundation was sound, more time was required to ensure that its purposes did not overlap with existing organizations. On October 31, 1991, the Subcommittee ordered reported H.R. 3507 as amended by the Valentine amendment in the nature of a substitute.

On November 22, 1991, the full Committee met to mark up H.R. 3507. The amendment in the nature of a substitute was further amended by an en bloc amendment offered by Mr. Valentine. The Valentine en bloc amendment incorporated 21 amendments proposed by Mr. Walker and one each by Mr. Ritter and Mr. Traficant to substitute for section 7 and add section 8, respectively. The Valentine en bloc amendment, among other things, deleted the requirement that the Commerce Department training grant program be located in the Technology Administration, clarified that program as discretionary, and specifically directed that no funds for that grant program could be taken out of the core research and competitiveness budget of the National Institute of Standards and Technology. H.R. 3507 as amended was then passed by a unanimous voice vote.

IV. SECTION-BY-SECTION ANALYSIS OF H.R. 3507 AS REPORTED

Section 1. Short Title

This Act may be cited as the "American Industrial Quality and Training Act of 1991."

Section 2. Findings

The findings explain that the United States faces ever greater challenges from highly trained foreign competition and will be undermined in years to come as more and more nations provide advanced industrial and technical skills training for their workforce as a matter of government policy. For the past 20 years, the economy of the United States has grown through a large expansion in the labor force. As a result of a slower growth rate expected in the 1990s, American industry will have to achieve vastly greater productivity rates in order to fuel economic expansion. Few primary

job opportunities are available for noncollege-bound youth. Instead, they settle into low-wage, low-skill, secondary labor market jobs for a period of several years before advancing to more career-oriented positions. Presently, the U.S. has no formal system to provide non-college-bound youth with opportunities to develop advanced skills for the modern workplace. Training needs are met through many individual, disconnected programs. Some U.S. companies have been very successful at furthering their competitive positions through a renewed attention to worker training and the adoption of total quality or similar competitiveness-oriented strategies. Finally, the Federal Government does not keep complete, comprehensive statistics on worker training, which contributes to our inability to raise national corporate awareness as to the importance of investing in human resources.

Section 3. American Workforce Quality Partnerships

American Workforce Quality Partnerships are programs between one or more manufacturing or technology-based firms and one or more institutions of higher education. Partnerships provide training to a significant proportion of the employer's workforce. In order to qualify, industry must be committed to adopting a competitiveness-oriented strategy such as Total Quality Management. Colleges gain enhanced ability to train other non-partnership affiliated citizens and an enhanced technical education infrastructure and capability. Workers get training in new work organization strategy, total quality techniques, technician or technical skills. Grants are made on a competitive basis with a matching funds provision. Funds can be used for the purchase or lease of training equipment but the Committee does not intend for this equipment to be used for commercial purposes. The Department of Commerce will administer the program, which is authorized at $50 million per year for fiscal years 1992 through 1996, out of existing funding.

Section 4. Youth Technical Apprenticeship Program

Section 4 establishes a Youth Technical Apprenticeship Program at the Department of Labor. This program provides training and employment in manufacturing or technology-based firms. It begins in the junior year of high school and ends with a degree or certificate from a community college. There is a provision to allow students to continue on to four year institutions. Industrial training is meant to expose the apprentice broadly for the program period. The equipment purchased or leased under this section should not be used for commercial manufacturing. A national clearinghouse on youth apprenticeship programs in the U.S. is established for the use of individuals or organizations that wish to learn more about or establish youth apprenticeship programs. This is a competitive grants program, authorized at $50 million per year for fiscal years 1992 through 1996, out of existing funding.

Section 5. Statewide Technical Education Training Network

Section 5 encourages states to unify their technical education and workforce training programs into coherent state-wide systems by awarding Statewide Technical Education Training Network grants for the purpose of planning these strategies. States may ex-

amine federal, state, and local programs to identify training needs that currently go unmet or populations which are currently underserved. States are asked to suggest ways to improve federal programs of this type. This also is a competitive grants program and is administered by the Department of Education. Matching funds are required. This section of the Act is authorized at $15 million per year for fiscal years 1992 through 1996, out of existing funding.

Section 6. Industry Worker Training Information

Section 6 directs the Department of Labor to gather comprehensive statistics, such as cost and quantity, on employment-based training. Statistics are also to be gathered on the characteristics of the individuals to whom this training is offered. The Department is to report to Congress biennially.

Section 7. Report on Total Quality Schools

Section 7 directs the Departments of Education and Commerce to work together in exploring the feasibility of applying the techniques of total quality management, as embodied in the Malcolm Baldrige Award, to secondary and postsecondary institutions of education. The Departments are to prepare a report that discusses relative benefits, costs, and obstacles, and that recommends federal policy options.

V. COMMITTEE VIEW

Needed improvements in American worker training

America's changing economy and the high-technology workplace will require a higher skilled worker in the years to come.

The U.S. must increase its investment in the workplace and workforce to remain competitive into the next century.

The practice of quality in the workplace determines, to a large degree, whether American companies are competitive in the marketplace. Education is crucial to achieving quality in the workforce.

Most of America's governmental training programs, especially at the federal level, are designed to serve a narrowly defined clientele. They were never intended to constitute a coherent, unified response to the nation's need for a skilled workforce. Within the Job Training Partnership Act (JTPA), for example, most of the funds are slated to go for training of "economically disadvantaged" workers, or of individuals from families below the poverty level. Not many of these individuals are expected to have the basic education and skills needed to handle high technology training. Programs should be developed that address the needs of general track students.

Employers are spending $30 billion on formal worker training programs each year, but even this seemingly large amount is too little for the U.S. to maintain a highly skilled workforce. At most, only one-third of this amount is spent on non-college educated workers, affecting no more than eight percent of our front-line workers. Two thirds of all organizations employing production workers provided them with no formal training in 1989. Employers should be encouraged to work with technical and community col-

leges to develop programs that will improve the technical skills of the front-line workers.

The concept of training generally evokes the idea of the college providing the classes and the receiving business or industry paying the cost. A new trend in the field is that of joint partnerships between the business or industry and the college. For these partnerships to be beneficial and profitable to both, they must involve shared risks, investments, and management.

VI. OVERSIGHT FINDINGS AND RECOMMENDATIONS

Pursuant to rule XI, clause 2(l)(3) of the Rules of the House of Representatives, under the authority of rule X, clause 2(b)(2) and clause 3(f), the Committee's oversight findings and conclusions are reflected in the recommendations found in the present bill and report.

VII. OVERSIGHT FINDINGS AND RECOMMENDATIONS BY THE COMMITTEE ON GOVERNMENT OPERATIONS

No statement of findings and recommendations on oversight activity pursuant to rule X, clause 2(b)(2), and rule XI, clause 2(l)(3), of the Rules of the House of Representatives, has been submitted by the Committee on Government Operations for inclusion in this report.

VIII. CONGRESSIONAL BUDGET ACT INFORMATION

This bill provides for new authorization rather than new budget authority, and consequently the provisions of Section 308(a) of the Congressional Budget Act of 1974 are not applicable.

IX. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

U.S. CONGRESS
CONGRESSIONAL BUDGET OFFICE
Washington, DC, December 5, 1991.

Hon. GEORGE E. BROWN, JR.,
Chairman, Committee on Science, Space, and Technology, House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed H.R. 3507, the American Industrial Quality and Training Act of 1991.

Enactment of H.R. 3507 would not affect direct spending or receipts. Therefore, pay-as-you-go procedures would not apply to the bill.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts are Mark Grabowicz and Cory Oltman.

Sincerely,

ROBERT D. REISCHAUER.

1. Bill number: H.R. 3507
2. Bill title: American Industrial Quality and Training Act of 1991
3. Bill status: As ordered reported by the House Committee on Science, Space, and Technology, November 22, 1991.

4. Bill purpose:

H.R. 3507 would: Authorize $50 million for each of the fiscal years 1992–1996 for the Secretary of Commerce to make grants for workforce quality partnerships between manufacturing or technology firms and institutions of higher education;

Authorize $50 million for each of the fiscal years 1992–1996 for the Secretary of Labor to make grants for youth technical apprenticeship programs involving secondary schools, postsecondary schools, and manufacturing or technology firms;

Authorize $15 million for each of the fiscal years 1992–1996 for the Secretary of Education to make grants to states for establishment of statewide technical education and training networks;

Authorize such sums as may be necessary for each of the fiscal years 1992–1996 for the Secretary of Labor to compile extensive information regarding worker training programs in U.S. industry and to report such information to the Congress biennially; and

Direct the Secretary of Education to prepare for the Congress a report on the applicability of total quality management principles to the U.S. educational system.

5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1992	1993	1994	1995	1996
Estimated Authorization Level	115	115	115	115	115
Estimated Outlays	10	90	110	115	115

The costs of this bill would fall within budget functions 500 and 370.

Basis of estimate: The estimate assumes that the Congress will appropriate the full amounts authorized for each fiscal year. The outlay estimates are based on the historical spending rates for these or similar activities.

Based on information from the Department of Labor, CBO estimates that the department's compilation of information and biennial reports to the Congress would cost less than $500,000 annually. CBO also estimates that the report required of the Department of Education would involve no significant cost.

6. Pay-as-you-go considerations: The Budget Enforcement Act of 1990 sets up pay-as-you-go procedures for legislation affecting direct spending or receipts through 1995. CBO estimates that enactment of H.R 3507 would not affect direct spending or receipts. Therefore, pay-as-you-go procedures would not apply to the bill.

7. Estimated cost to State and local governments: H.R. 3507 would impose no costs on state or local governments, but the grants for statewide technical education and training networks would require states to fund at least 50% of the cost of the projects for which the grants are intended.

8. Estimate comparison: None.

9. Previous CBO estimate: None.

10. Estimate prepared by: Mark Grabowicz and Cory Oltman.

11. Estimate approved by: C.G. Nuckols, for James L. Blum, Assistant Director for Budget Analysis.

X. EFFECT OF THE LEGISLATION ON INFLATION

In accordance with rule XI, clause 2(l)(4), of the Rules of the House of Representatives, this legislation is assessed to have no adverse inflationary effect on prices and costs in the operation of the national economy.

XI. CHANGES IN EXISTING LAW MADE BY THIS BILL, AS REPORTED

Since no changes in existing law are made by the bill, a section showing changes made in existing law, in compliance with clause 3 of rule XIII of the Rules of the House of Representatives, is not included.

XII. COMMITTEE RECOMMENDATION

A quorum being present, the bill was ordered reported on November 22, 1991, by a voice vote of the Committee.

XIII. ADDITIONAL VIEW

Notwithstanding the adoption of 21 of my amendments during markup, this new, half billion dollar grant program for worker training and education raises serious policy questions regarding coordination and consistency of mission, duplication of existing programs and budget.

That's not to say its goals and intent aren't laudable—improving the quality of the U.S. workforce is something I, and I'm sure every member of this Committee, supports. But the establishment of a grant program in the Department of Commerce to retrain recipients' employees is a basic, significant policy change to the Department's mission of supporting industrial R&D. This program, if justified, seems much more appropriate in the Labor Department. It could seriously damage the focus and support of the Commerce technology development effort.

Even if transferred, the proposed program is duplicative of existing retraining programs, especially efforts under the Job Training Partnership Act, the Trade Adjustment Assistance Act, the Adult Education Act, the Carl D. Perkins Vocational and Applied Technology Education Act, the Even Start Program, and the Job Opportunities and Basic Skills Program. The Department of Labor further points to assistance to businesses through the National Advisory Commission on Work-Based Learning and the Commission on Achieving Necessary Skills. In addition, our tax system subsidizes employer training of workers through credits. The Under Secretary of Commerce for Technology, Robert White, testified in opposition to this legislation, citing the multiplicity of ongoing activities within the federal government, the business sector, state and local governments, and employee organizations.

Additionally, funding this new grant program out of the Commerce Department could do very serious harm to the technology and competitiveness authorization we hope to finally pass after three years of deliberation. At least the core research program at the National Institute of Standards and Technology, so badly raided already by the appropriators to fund existing grant programs, is protected by language adopted by the Committee.

Finally, the bill requires the Secretary to select industries for preferential subsidization because of their importance to economic security. This is the type of industrial policy that the Committee has sought to avoid in other legislation, including the American Technology Preeminence Act. This picking of winners and losers should be dropped.

ROBERT S. WALKER.